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BUREAU OF ENTOMOLOGY.

THE MOVEMENT OF THE COTTON BOLL WEEVIL IN 1914.

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The extremely early frosts of 1913 killed the boll weevil in an area averaging about 20 miles in width around the outside of the entire infested area. This and several additional unusual conditions influenced the spread of the weevil during the season of 1914. The hot, dry weather in the early season reduced the numbers of the weevils. This was followed in many sections by heavy rains, which caused increased growth of squares. In southern Alabama and Florida this growth supplied the weevils with food. In all other sections the complete defoliation by the cotton-leaf worm almost entirely eliminated the late fall food supply of the weevils and caused a wide dispersion. As a consequence of these conditions, the weevils completely recovered all territory lost during the winter. In Texas, Arkansas, Mississippi, and the greater portion of Alabama material gains were made, while in southwestern Alabama and Florida the movement was small.

In Texas the limit of the infested area runs from Del Rio, on the Rio Grande, in Val Verde County; thence including Sonora, in Sutton County; 3 miles west of Ballinger, in Runnels County; just east of Merkel, in Taylor County; just south of Stoneburg, in Montague County; just west of Decatur, in Wise County; through Fort Worth, in Tarrant County; 3 miles southwest of Cleburne and 2 miles south of Alvarado, in Johnson County; through Waxahatchie and Garret, in Ellis County; 7 miles west of Quinlan, in Hunt County; 4 miles west of Honey Grove, in Fannin County. The peculiar depression in the north Texas line occurs on the black prairie, where summer heat and winter cold, with the lack of protection, serve to hold the weevil down.

In Oklahoma the line extends just east of Bennington, northwest of Antlers, and leaves the State opposite the northern edge of Polk County, Ark.

In Arkansas the line extends from this point north of Morrilton and Plumerville, just south of Searcy, to the Mississippi-Tennessee boundary line.

In Mississippi the line passes about 1 mile south of the Tennessee line at Horn Lake, and through Olive Branch, in De Soto County; through Mount Pleasant, 3 miles from Tennessee, in Marshall County; 3 miles northeast of Lamar and 6 miles from Tennessee, in Benton County; through Walnut and about 5 miles from Tennessee, in Tippah County; north of Rienzi, in Alcorn County; and north of Baden in Tishomingo County.

In Alabama the line passes through Russellville in Franklin County; the southwestern corner of Cullman County; 6 miles northeast of Birmingham in Jefferson County; 3 miles west of Wilsonville in Shelby County; in the Coosa Valley on the eastern border of Chilton County; 2 miles west of Wetumpka in Elmore County; through Sledges on the eastern edge of Montgomery County; 3 miles northeast of Inverness in Bullock County; 1 mile northeast of Clio in Barbour County; east of Skipperville and Mabson in Dale County; Headland in Henry County; 3 miles west of Columbia and 3 miles east of Ashford in Houston County, in other words, within 3 miles of Georgia.

In Florida the line extends from the northeast corner of Jackson County through Grand Ridge, and through Blountstown in Calhoun County. The weevil has not been found at any point east of the Appalachianicola River.

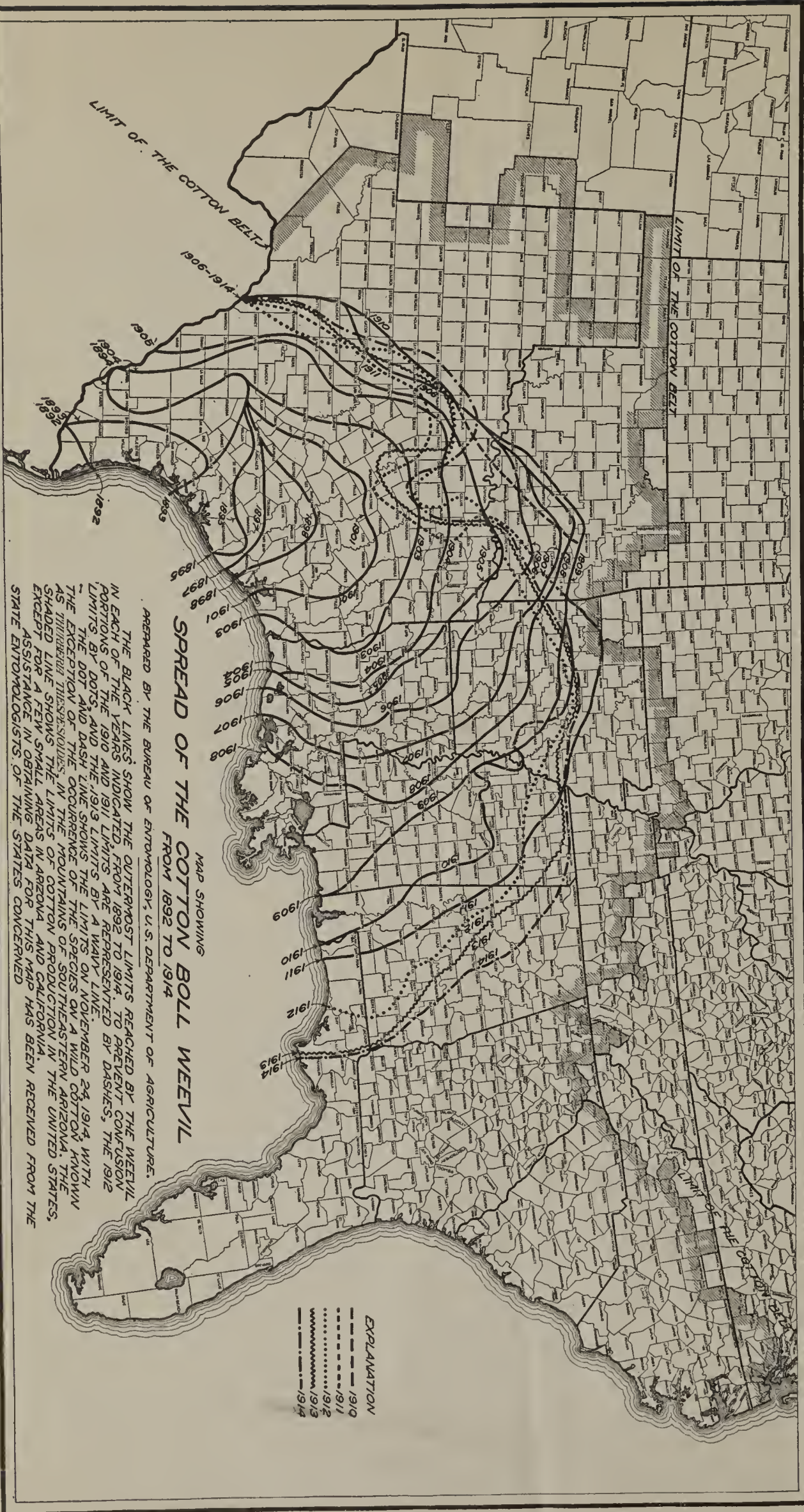
Altogether, the weevil invaded 15,800 square miles of territory in 1914. About 300,000 square miles of territory still remains uninfested in the cotton belt. Since entering the United States the weevil has averaged 13,580 square miles a year, and during the last five years only 11,660 square miles a year. It will be seen, therefore, that the 1914 movement is in excess of the five-year average and of the average for the entire period.

The following table shows the 1914 gains in square miles, by States:

Total area infested by the boll weevil in 1914.

STATE.	Area infested in 1913.	Gain in 1914.	Area infested in 1914.
	<i>Square miles.</i>	<i>Square miles.</i>	<i>Square miles.</i>
Texas.....	147, 200	6, 000	153, 200
Louisiana.....	40, 800	40, 800
Oklahoma.....	4, 000	4, 000
Arkansas.....	29, 000	300	29, 300
Mississippi.....	44, 300	1, 700	46, 000
Alabama.....	24, 900	6, 800	31, 700
Florida.....	6, 300	1, 000	7, 300
Total.....	296, 500	15, 800	312, 300

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EXPLANATION
—— 1910
- - - 1911
..... 1912
~~~~~ 1913  
~~~~~ 1914

MAP SHOWING
SPREAD OF THE COTTON BOLL WEEVIL
FROM 1892 TO 1914

PREPARED BY THE BUREAU OF ENTOMOLOGY, U.S. DEPARTMENT OF AGRICULTURE.

THE BLACK LINES SHOW THE OUTERMOST LIMITS REACHED BY THE WEEVIL IN EACH OF THE YEARS INDICATED, FROM 1892 TO 1914. TO PREVENT CONFUSION PORTIONS OF THE 1910 AND 1911 LIMITS ARE REPRESENTED BY DASHES, THE 1912 LIMITS BY DOTS, AND THE 1913 LIMITS BY A WAVY LINE.

THE DOT AND DASH LINE SHOWS THE LIMITS ON NOVEMBER 24, 1914, WITH THE EXCEPTION OF THE OCCURRENCE OF THE SPECIES ON A WILD COTTON KNOWN AS *THURBERGIA* THESE SPECIES, IN THE MOUNTAINS OF SOUTHEASTERN ARIZONA. THE SHADED LINE SHOWS THE LIMITS OF COTTON PRODUCTION IN THE UNITED STATES, EXCEPT FOR A FEW SMALL AREAS IN ARIZONA AND CALIFORNIA.

ASSISTANCE IN OBTAINING DATA FOR THIS MAP HAS BEEN RECEIVED FROM THE STATE ENTOMOLOGISTS OF THE STATES CONCERNED.